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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,650	11/10/2003	Manabu Hasegawa	4296-170 US	6131

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EXAMINER

ZUCKER, PAUL A

ART UNIT	PAPER NUMBER
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1621

DATE MAILED: 06/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/705,650	Applicant(s) HASEGAWA ET AL.	
	Examiner Paul A. Zucker	Art Unit 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
 4a) Of the above claim(s) 1-4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 5-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/5/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-3, drawn to a method for producing, classified in class 562, subclass 598.
- II. Claims 4-9, drawn to zinc acrylate, classified in class 562, subclass 598.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process. For example a process employing zinc hydroxide may be used instead of the instant zinc oxide (See Arndt, column 2, lines 36-48).

1. During a telephone conversation with Diane Dunn McKay on 26 May 2004 a provisional election was made with traverse to prosecute the invention of Group II, claims 4-9. Affirmation of this election must be made by applicant in replying to this

Office action. Claims 1-3 are held withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
3. The disclosure is objected to because of the following informalities:
 - a. Page 3, lines 22-24 and Page 18, line 22: For example, spaces are required between the words at the indicated locations. Applicants should correct any other errors of this type.
 - b. Page 21, line 13: The word "ratio" is misspelled.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al (US 5,789,616 08-1998).

Instantly claimed are zinc acrylate crystals having a long axis of not less than 5 μm and an aspect ratio in the range of 1-30 falling within the size range of 6 μm to just under 1 mm in the longest dimension.

Kobayashi teaches (Column 5, line 42- column 7, line 44) formation of zinc acrylate in a variety of size distributions using a zinc acrylate/zinc stearate composition.

Kobayashi teaches screening the various product powders through a 105 μm sieve.

Assuming a minimum particle dimension of 1 μm , at least some of those particles (those having maximum dimensions of 1-30, see Figs. 1-6) must have an aspect ratio in the required range. Kobayashi exemplifies (Fig. 3) a sample in which 90% of the particles will pass through a 1 mm sieve. Similarly, Kobayashi exemplifies (Fig. 2) a sample that has a 60% particle diameter of not less than 6 μm .

Kobayashi is silent with regard with regard to degree of compaction and solid disintegrating load of the zinc acrylate.

Kobayashi, however, teaches (Column 5, line 42- column 7, line 44) that the particle size distribution of the zinc acrylate obtained can be controlled by the addition of

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varying amounts of the anionic surfactant sodium dioctyl sulfosuccinate. Kobayashi further teaches (Abstract) that this permits easy pulverization into a fine powder (reduced dintegrating load). The Examiner assumes, in the absence of evidence to the contrary, that the powders of Kobayashi have the instantly required degree of compaction.

One of ordinary skill in the art would have been motivated by Kobayashi to adjust the particle size distribution of zinc acrylate powder in order to optimize the handling properties of the resulting zinc acrylate and produce a more cost-effective method for its production. Since Kobayashi teaches the method for adjusting particle size distributions there would have been a reasonable expectation for success.

Thus the instantly claimed zinc acrylate and its compositions would have been obvious to one of ordinary skill in the art.

Examiner's Suggestion

5. The Examiner suggests that Applicants amend claim 4 to place it in better form as follows:
 - a. The phrase [forming the] in line 1 should be deleted;
 - b. The word [thereof] in line 1 should be deleted.

Conclusion

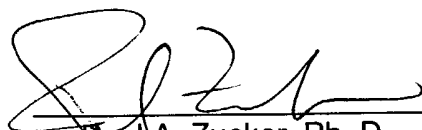
6. Claims 1-9 are pending. Claims 4-9 are rejected. Claims 1-3 are held withdrawn from consideration as being drawn to a non-elected invention.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul A. Zucker whose telephone number is 571-272-0650. The examiner can normally be reached on Monday-Friday 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Paul A. Zucker', is written over a horizontal line.

Paul A. Zucker, Ph. D.
Patent Examiner
Technology Center 1600